IN THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the present application:

1. (Canceled)

2. (Previously Presented) The two-part epoxy adhesive of claim 55 wherein the epoxy adhesive has an initial curing time of less than 3 hours.

3. (Previously Presented) The two-part epoxy adhesive of claim 55 wherein said resin component further includes a coupling agent, fillers, a thixotropic agent, and a plasticizer/accelerator that acts as both a plasticizer and an accelerator.

4. (Previously Presented) The two-part epoxy adhesive of claim 55 wherein said hardener component further includes said plasticizer/accelerator that acts as both a plasticizer and an accelerator, and a thixotropic agent.

5. (Previously Presented) The two-part epoxy adhesive of claim 55 wherein said resin component comprises by weight:

30-75% epoxy resin,
5-40% internally flexibilized epoxy resin,
5-40% plasticizer/accelerator that acts as both a plasticizer and an accelerator,
0.1-1% coupling agent,
11-45% filler, and
1-8 % thixotropic agent.

6. (Original) The two-part epoxy adhesive of claim 5 wherein said epoxy resin is a Bisphenol A epoxy resin, said internally flexibilized epoxy resin is an internally flexibilized Bisphenol A type epoxy resin, said plasticizer/accelerator is a phenol based plasticizer/accelerator, said coupling agent is an epoxide functional silane base coupling agent, and said filler is a mixture of limestone filler and white pigment.

7-9. (Canceled)

10. (Previously Presented) The two-part epoxy adhesive of claim 58 wherein said resin component further includes a coupling agent, fillers, a thixotropic agent, and a plasticizer/accelerator that acts as both a plasticizer and an accelerator wherein said plasticizer/accelerator is free of nonylphenol.

11. (Original) The two-part epoxy adhesive of claim 10 wherein said plasticizer/accelerator free of nonylphenol is dinonylphenol.

12. (Previously Presented) The two-part epoxy adhesive of claim 58 wherein said hardener component further includes said plasticizer/accelerator that acts as both a plasticizer and an accelerator, said plasticizer/accelerator being free of nonylphenol, and a thixotropic agent.

13. (Original) The two-part epoxy adhesive of claim 12 wherein said plasticizer/accelerator free of nonylphenol is dinonylphenol.

14. (Previously Presented) The two-part epoxy adhesive of claim 58 wherein said resin component comprises by weight:

30-75% epoxy resin,

5-40% internally flexibilized epoxy resin,

5-40% plasticizer/accelerator that acts as both a plasticizer and an accelerator wherein

said plasticizer/accelerator is free of nonylphenol,

0.1-1% coupling agent,

11-45% filler, and

1-8 % thixotropic agent.

15. (Original) The two-part epoxy adhesive of claim 14 wherein said plasticizer/accelerator free of nonylphenol is dinonylphenol.

16. (Original) The two-part epoxy adhesive of claim 14 wherein said epoxy resin is a Bisphenol A epoxy resin, said internally flexibilized epoxy resin is an internally flexibilized Bisphenol A type epoxy resin, said coupling agent is an epoxide functional silane base coupling agent, and said filler is a mixture of limestone filler and white pigment.

17. (Canceled)

18. (Previously Presented) The two-part epoxy adhesive of claim 58 wherein said hardener component further includes said plasticizer/accelerator that acts as both a plasticizer and an accelerator, said plasticizer/accelerator being free of nonylphenol, wherein said plasticizer/accelerator free of nonylphenol is dinonylphenol, and a thixotropic agent.

19. (Previously Presented) The two-part epoxy adhesive of claim 58 wherein said flexibilizer is an amine terminated butadiene acrylonitrile adduct, and said unmodified aliphatic amine is a mixture of an unmodified glycol ether base aliphatic amine and unmodified AEP base aliphatic amine.

20. (Previously Presented) The two-part epoxy adhesive of claim 55 wherein the reactive mixture of said resin component and said hardener component has an initial curing time of about 1.5-2 hours and after curing the epoxy adhesive has a tensile elongation at room temperature of

greater than 120%.

21. (Previously Presented) The two-part epoxy adhesive of claim 20 comprising:

a) a resin component comprising a mixture of:

40-45% Bisphenol A epoxy resin,

8-15% internally flexibilized Bisphenol A type epoxy resin,

10-20% phenol based plasticizer/accelerator that acts as both a plasticizer and an accelerator,

0.3-0.6% epoxide functional silane base coupling agent,

15-25% limestone filler,

0.5-2% white pigment, and

4-6% thixotropic agent, and

b) a hardener component comprising a mixture of:

40-45% amine terminated butadiene acrylonitrile adduct,

7-15% unmodified glycol ether base aliphatic amine,

5-8% tertiary amine accelerator,

25-40% AEP base modified amine, and

1-8% thixotropic agent.

22. (Previously Presented) The two-part epoxy adhesive of claim 58 wherein the reactive mixture of said resin component and said hardener component has an initial curing time of about 1.5-2 hours and after curing the epoxy adhesive has a tensile elongation at room temperature of greater than 80%.

23. (Previously Presented) The two-part epoxy adhesive of claim 22 comprising:

a) the resin component free of nonylphenol comprising a mixture of:

45-55% Bisphenol A epoxy resin,

8-15% internally flexibilized Bisphenol A type epoxy resin,

10-20% dinonylphenol plasticizer/accelerator that acts as both a plasticizer and an accelerator,
0.3-0.6% epoxide functional silane base coupling agent,
15-25% limestone filler,
0.5-2% white pigment, and
4-6% thixotropic agent, and

b) the hardener component free of nonylphenol comprising a mixture of:
55-65% amine terminated butadiene acrylonitrile adduct,
7-15% unmodified glycol ether base aliphatic amine,
5-8% unmodified AEP base aliphatic amine,
5-8% tertiary amine accelerator,
8-15% dinonylphenol plasticizer/accelerator that acts as both a plasticizer and an accelerator, and
4-6% thixotropic agent.

24. (Canceled)

25. (Previously Presented) The process of claim 56 wherein in said curing it takes less than 3 hours for initial curing.

26. (Previously Presented) The process of claim 56 wherein said act of intercalating includes dispensing said resin component and hardener component in equal parts by volume and mixing until the mixture is relatively homogeneous and is applied relatively evenly to the substrates.

27. (Previously Presented) The process of claim 56 wherein said resin component further includes said plasticizer/accelerator that acts as both a plasticizer and an accelerator, coupling agent, fillers, and a thixotropic agent.

28. (Previously Presented) The process of claim 56 wherein said hardener component further includes said plasticizer/accelerator that acts as both a plasticizer and an accelerator, and a thixotropic agent.

29. (Previously Presented) The process of claim 56 wherein said resin component comprises by weight:

30-75% epoxy resin,

5-40% internally flexibilized epoxy resin,

5-40% plasticizer/accelerator that acts as both a plasticizer and an accelerator,

0.1-1% coupling agent,

11-45% filler, and

1-8 % thixotropic agent.

30. (Original) The process of claim 29 wherein said epoxy resin is a Bisphenol A epoxy resin, said internally flexibilized epoxy resin is an internally flexibilized Bisphenol A type epoxy resin, said plasticizer/accelerator is a phenol based plasticizer/accelerator, said coupling agent is an epoxide functional silane base coupling agent, and said filler is a mixture of limestone filler and white pigment.

31. (Currently Amended) The process of claim 56 wherein said hardener component comprises by weight:

20-80% flexibilizer, wherein said flexibilizer is selected from amine terminated butadiene acrylonitrile adducts or carboxyl terminated butadiene acrylonitrile adducts,

5-30% unmodified aliphatic amine, wherein said unmodified aliphatic amine comprises an unmodified glycol ether base aliphatic amine,

1-10% accelerator, wherein said accelerator comprises a tertiary amine accelerator,

10-50% modified aliphatic amine, wherein said modified aliphatic amine comprises an AEP base modified amine, and

1-8% thixotropic agent.

32. (Original) The process of claim 31 wherein said flexibilizer is an amine terminated butadiene acrylonitrile adduct, said unmodified aliphatic amine is an unmodified glycol ether base aliphatic amine, said accelerator is a tertiary amine accelerator, and said modified aliphatic amine is an AEP base modified amine.

33. (Previously Presented) The process of claim 56 wherein:

a) said resin component comprises a mixture of:
40-45% Bisphenol A epoxy resin,
8-15% internally flexibilized Bisphenol A type epoxy resin,
10-20% phenol based plasticizer/accelerator that acts as both a plasticizer and an accelerator,
0.3-0.6% epoxide functional silane base coupling agent,
15-25% limestone filler,
0.5-2% white pigment, and
4-6% thixotropic agent, and

b) said hardener component comprises a mixture of:
40-45% amine terminated butadiene acrylonitrile adduct,
7-15% unmodified glycol ether base aliphatic amine,
5-8% tertiary amine accelerator,
25-40% AEP base modified amine, and
1-8% thixotropic agent.

34. (Canceled)

35. (Previously Presented) The process of claim 59 wherein said resin component free of nonylphenol further includes a coupling agent, fillers, a thixotropic agent, and said

plasticizer/accelerator that acts as both a plasticizer and an accelerator wherein said plasticizer/accelerator is free of nonylphenol.

36. (Original) The process of claim 35 wherein said plasticizer/accelerator free of nonylphenol is dinonylphenol.

37. (Previously Presented) The process of claim 59 wherein said hardener component free of nonylphenol further includes said plasticizer/accelerator that acts as both a plasticizer and an accelerator, said plasticizer/accelerator being free of nonylphenol, and a thixotropic agent.

38. (Original) The process of claim 37 wherein said plasticizer/accelerator free of nonylphenol is dinonylphenol.

39. (Previously Presented) The process of claim 59 wherein said resin component free of nonylphenol comprises by weight:

30-75% epoxy resin,
5-40% internally flexibilized epoxy resin,
5-40% dinonylphenol plasticizer/accelerator that acts as both a plasticizer and an accelerator,
0.1-1% coupling agent,
11-45% filler, and
1-8 % thixotropic agent.

40. (Original) The process of claim 39 wherein said epoxy resin is a Bisphenol A epoxy resin, said internally flexibilized epoxy resin is an internally flexibilized Bisphenol A type epoxy resin, said coupling agent is an epoxide functional silane base coupling agent, and said filler is a mixture of limestone filler and white pigment.

41. (Previously Presented) The process of claim 59 wherein said hardener component free of nonylphenol comprises by weight:

5-10% dinonylphenol plasticizer/accelerator, that acts as both a plasticizer and an accelerator, and

1-8% thixotropic agent.

42. (Previously Presented) The process of claim 41 wherein said flexibilizer is an amine terminated butadiene acrylonitrile adduct, and said unmodified aliphatic amine is a mixture of an unmodified glycol ether base aliphatic amine and an unmodified AEP aliphatic amine.

43. (Previously Presented) The process of claim 59 wherein:

a) said resin component free of nonylphenol comprises a mixture of:

45-55% Bisphenol A epoxy resin,

8-15% internally flexibilized Bisphenol A type epoxy resin,

10-20% dinonylphenol plasticizer/accelerator that acts as both a plasticizer and an accelerator,

0.3-0.6% epoxide functional silane base coupling agent,

15-25% limestone filler,

0.5-2% white pigment and

4-6% thixotropic agent, and

b) said hardener component free of nonylphenol comprises a mixture of:

55-65% amine terminated butadiene acrylonitrile adduct,

7-15% unmodified glycol ether base aliphatic amine,

5-8% unmodified AEP aliphatic amine,

5-8% tertiary amine accelerator,

8-15% dinonylphenol plasticizer/accelerator that acts as both a plasticizer and an accelerator, and

4-6% thixotropic agent.

44. (Canceled)

45. (Previously Presented) The process of claim 57 wherein said resin component is free of nonylphenol, and said hardener component is free of nonylphenol.

46. (Previously Presented) The process of claim 45 wherein said plasticizer/accelerator is dinonylphenol.

47. (Previously Presented) The two-part epoxy adhesive of claim 55 wherein the internally flexibilized epoxy resin is selected from internally flexibilized bisphenol A type epoxy resins and internally flexibilized bisphenol F type epoxy resins.

48. (Previously Presented) The two-part epoxy adhesive of claim 55 wherein the internally flexibilized epoxy resin is a butylated bisphenol A epoxy resin.

49. (Currently Amended) The two-part epoxy adhesive of claim 55 wherein the flexibilizer is selected from carboxyl terminated butadiene acrylonitrile ~~flexibilizers~~ adducts.

50. (Currently Amended) The two-part epoxy adhesive of claim 55 wherein the flexibilizer is selected from amine terminated butadiene acrylonitrile ~~flexibilizers~~ adducts.

51. (Previously Presented) The process of claim 56 wherein the internally flexibilized epoxy resin is selected from internally flexibilized bisphenol A type epoxy resins and internally flexibilized bisphenol F type epoxy resins.

52. (Previously Presented) The process of claim 56 wherein the internally flexibilized epoxy resin is a butylated bisphenol A epoxy resin.

53. (Currently Amended) The process of claim 56 wherein the flexibilizer is selected from carboxyl terminated butadiene acrylonitrile ~~flexibilizers~~ adducts.

54. (Currently Amended) The process of claim 56 wherein the flexibilizer is selected from amine terminated butadiene acrylonitrile ~~flexibilizers~~ adducts.

55. (Currently Amended) A two-part epoxy adhesive comprising:

a) a resin component comprising a mixture of epoxy resin, and an internally flexibilized epoxy resin, and

b) a hardener component ~~comprising~~ consisting essentially of a mixture by weight of:

20-80% flexibilizer, wherein said flexibilizer is selected from amine terminated butadiene acrylonitrile adducts or carboxyl terminated butadiene acrylonitrile adducts,

5-30% unmodified aliphatic amine, wherein said unmodified aliphatic amine comprises an unmodified glycol ether base aliphatic amine,

10-50% modified aliphatic amine, wherein said modified aliphatic amine comprises an AEP base modified amine,

0-15% unmodified or modified polyamide,

1-10% accelerator, wherein said accelerator comprises a tertiary amine accelerator, and optionally 5-20% plasticizer/accelerator that acts as both a plasticizer and an accelerator; wherein after said resin component and said hardener component are mixed and reacted the cured epoxy adhesive has a tensile elongation at room temperature of greater than 30%.

56. (Currently Amended) The process of adhering at least two substrate surfaces to each other comprising:

intercalating between said surfaces an adhesive comprising a reactive mixture of:

a) a resin component comprising a mixture of epoxy resin, and internally flexible epoxy resin, and

b) a hardener component ~~comprising~~ consisting essentially of a mixture by weight of:

20-80% flexibilizer, wherein said flexibilizer is selected from amine terminated butadiene acrylonitrile adducts or carboxyl terminated butadiene acrylonitrile adducts,

5-30% unmodified aliphatic amine, wherein said unmodified aliphatic amine comprises an unmodified glycol ether base aliphatic amine,

10-50% modified aliphatic amine, wherein said modified aliphatic amine comprises an AEP base modified amine,

0-15% unmodified or modified polyamide,

1-10% accelerator, wherein said accelerator is a tertiary amine accelerator, and

optionally 5-20% plasticizer/accelerator that acts as both a plasticizer and an accelerator; and

allowing said adhesive to cure, whereby said cured adhesive has a tensile elongation at room temperature of greater than 30%.

57. (Currently Amended) A process for making a two-part epoxy adhesive comprising:

preparing a resin component by mixing an epoxy resin, an internally flexibilized epoxy resin, a plasticizer/accelerator that acts as both a plasticizer and an accelerator, a coupling agent, fillers, and a thixotropic agent, and

preparing a hardener component ~~comprising~~ consisting essentially of a mixture by weight of:

20-80% flexibilizer,

5-45% unmodified aliphatic amine,

0-50% modified aliphatic amine,

0-15% unmodified or modified polyamide,

1-10% accelerator, and

optionally 5-20% plasticizer/accelerator that acts as both a plasticizer and an accelerator.

58. (Currently Amended) A two-part epoxy adhesive comprising:

a) a resin component comprising a mixture of epoxy resin, and an internally flexibilized epoxy resin, and

b) a hardener component ~~comprising~~ consisting essentially of a mixture by weight of:

30-80% flexibilizer, wherein said flexibilizer is selected from amine terminated butadiene acrylonitrile adducts or carboxyl terminated butadiene acrylonitrile adducts,

[[8]] 5-45% unmodified aliphatic amine, wherein said unmodified aliphatic amine comprises an unmodified glycol ether base aliphatic amine,

0-15% modified aliphatic amine, wherein said modified aliphatic amine comprises an AEP base modified amine,

0-15% unmodified or modified polyamide,

1-10% accelerator, wherein said accelerator is a tertiary amine accelerator, and

optionally 5-20% plasticizer/accelerator that acts as both a plasticizer and an accelerator;

wherein after said resin component and said hardener component are mixed and reacted the cured epoxy adhesive has a tensile elongation at room temperature of greater than 30%, and wherein said resin component is free of nonylphenol and said hardener component is free of nonylphenol.

59. (Currently Amended) The process of adhering at least two substrate surfaces to each

other comprising:

intercalating between said surfaces an adhesive comprising a reactive mixture of:

a) a resin component comprising a mixture of epoxy resin, and internally flexible epoxy resin, and

b) a hardener component ~~comprising~~ consisting essentially of a mixture by weight of:

30-80% flexibilizer, wherein said flexibilizer is selected from amine terminated butadiene acrylonitrile adducts or carboxyl terminated butadiene acrylonitrile adducts,

[[8]] 5-45% unmodified aliphatic amine, wherein said unmodified aliphatic amine comprises an unmodified glycol ether base aliphatic amine,

0-15% modified aliphatic amine, wherein said modified aliphatic amine comprises an AEP base modified amine,

0-15% unmodified or modified polyamide,

1-10% accelerator, wherein said accelerator is a tertiary amine accelerator, and

optionally 5-20% plasticizer/accelerator that acts as both a plasticizer and an accelerator; and

allowing said adhesive to cure, whereby said cured adhesive has a tensile elongation at room temperature of greater than 30%, and wherein said resin component is free of nonylphenol and said hardener component is free of nonylphenol.